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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NATHAN PIETER DEN HERDER, HAMILTON FOUT, STEVEN PIERCE, ERIC ROSENBLATT, and JOHN TREADWELL

Appeal 2015-000580
Application 13/346,153
Technology Center 3600

Before MURRIEL E. CRAWFORD, NINA L. MEDLOCK, and AMEE A. SHAH, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the Examiner's final decision rejecting claims 1–6, 10–15, and 19–24. We have jurisdiction over the appeal under 35 U.S.C. § 6(b). Appellants appeared for an oral hearing on January 10, 2017.

We AFFIRM.

BACKGROUND

Appellants' invention is directed to a property appraisal evaluation using traffic data (Spec. 1).

Claim 1 is illustrative:

> 1. A method for evaluating comparable properties in an automated valuation model, the method comprising:
>
> accessing, by a processing unit, property data corresponding to a geographical area;
>
> determining subset geographical areas within the geographical area;
>
> performing, by the processing unit, a regression based upon the property data, the regression modeling the relationship between price and explanatory variables, the explanatory variables including a set of one or more traffic variables, the traffic variables including a marketability variable, wherein a value for the marketability variable is associated to properties located within each of the subset geographical areas, the marketability variable being an average commute time respectively assigned to each of the subset geographical areas;
>
> identifying a subject property; and
>
> evaluating, by the processing unit, comparable properties corresponding to the subject property based upon results of the regression.

The Examiner relies on the following prior art reference as evidence of unpatentability:

Sennott	US 2004/0019517 A1	Jan. 29, 2004
Stinson	US 2012/0005109 A1	Jan. 5, 2012

Impact of Highways on Property Values: Case Study of the Superstition Freeway Corridor, AZ. TRANSP. RESEARCH CTR. (2001) (hereinafter "US60").

Dana George, *What Affects the Appraisal Value of a House?* (hereinafter "CommuteTime"), http://web.archive.org/web/20101113203827/ http://homeguides. sfgate.com/affects-appraisal-value-house-1211.html (last visited Feb. 5, 2013).

Willaim T. Hughes & C. F. Sirmans, *Adjusting House Prices for Intra-Neighborhood Traffic Differences*, APPRAISAL J. (1993) (hereinafter "Traffic"), http://www.highbeam.com/doc/ 1 G1-14522638.html# (last visited Feb. 5, 2013).

J. Archer et al., *The Impact of Lowered Speed Limits in Urban and Metropolitan Areas* (hereinafter "SpeedLimit"), https://mail-attachment. googleusercontent.com/... sadet=1360602299823&sads=zxzl C-PUkoKPCVVL8LnZSF2qFW_o&sadssc=1 (last visited Feb. 11, 2013).

Appellants appeal the following rejections:

Claims 1–6, 10–15, and 19–24 under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 1, 2, 10, 11, 19, and 20 under 35 U.S.C. § 103(a) as unpatentable over Stinson, Sennott, US60, and CommuteTime.

Claims 3, 12, and 21 under 35 U.S.C. § 103(a) as unpatentable over Stinson, Sennott, US60, CommuteTime, and Traffic.

Claims 4, 5, 13, 14, 22, and 23 under 35 U.S.C. § 103(a) as unpatentable over Stinson, Sennott, US60, CommuteTime, Traffic, and Official Notice.

Claims 6, 15, and 24 under 35 U.S.C. § 103(a) as unpatentable over Stinson, Sennott, US60, CommuteTime, Traffic, and SpeedLimit.

ISSUES

Did the Examiner err in rejecting the claims under 35 U.S.C. § 101 because the claims are not directed to an abstract idea?

Did the Examiner err in rejecting claim 1 under 35 U.S.C. § 103(a) because Stinson does not teach a regression analysis that models the relationship between price and traffic variables that includes a marketability variable and does not relate to a subset of geographical area?

Did the Examiner err in rejecting claim 1 under 35 U.S.C. § 103(a) because Sennott does not include a traffic variable in the valuation?

PRINCIPLES OF LAW

Burden of the Examiner

The prima facie case is merely a procedural device that enables an appropriate shift of the burden of production. *In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011); *Hyatt v. Dudas*, 492 F.3d 1365, 1369 (Fed. Cir.2007) (citing *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir.1992)); *see also In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). The Patent and Trademark Office ("PTO") satisfies its initial burden of production by "adequately explain[ing] the shortcomings it perceives so that the applicant is properly notified and able to respond." *Hyatt*, 492 F.3d at 1370. In other words, the PTO carries its procedural burden of establishing a prima facie case when its rejection satisfies 35 U.S.C. § 132, in "notify[ing] the applicant . . . [by] stating the reasons for [its] rejection, or objection or requirement, together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application." 35 U.S.C. § 132. That section "is violated when a rejection is so uninformative that it

prevents the applicant from recognizing and seeking to counter the grounds for rejection." *Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir.1990).

35 U.S.C. § 132 ensures that an applicant is informed of the broad statutory basis for the rejection of his claims, so that he may determine what the issues are on which he can or should produce evidence. *Chester*, 906 F.2d at 1578.

> [A]ll that is required of the office to meet its prima facie burden of production is to set forth the statutory basis of the rejection and the reference or references relied upon in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. As the statute itself instructs, the examiner must "notify the applicant," "stating the reasons for such rejection," "together with such information and references as may be useful in judging the propriety of continuing prosecution of his application." 35 U.S.C. § 132.

In re Jung, 637 F.3d at 1363.

It is well-established that the Board is free to affirm an examiner's rejection so long as "appellants have had [a] fair opportunity to react to the thrust of the rejection." *In re Kronig*, 539 F.2d 1300, 1302–03 (CCPA 1976); *In re Jung*, 637 F.3d at 1365.

Rejections under 35 U.S.C. § 101

The Supreme Court set forth an analytical framework under § 101 to distinguish patents that claim patent-ineligible laws of nature, natural phenomena, and abstract ideas—or add too little to such underlying ineligible subject matter—from those that claim patent-eligible applications of those concepts. First, given the nature of the invention in this case, we determine whether the claims at issue are directed to a patent-ineligible abstract idea. *Alice Corp. v. CLS Bank*

Int'l, 134 S. Ct. 2347, 2355, 189 L.Ed.2d 296 (2014). If so, we then consider the elements of each claim—both individually and as an ordered combination—to determine whether the additional elements transform the nature of the claim into a patent-eligible application of that abstract idea. *Id.* This second step is the search for an "inventive concept," or some element or combination of elements sufficient to ensure that the claim in practice amounts to "significantly more" than a patent on an ineligible concept. *Id.*

FACTUAL FINDINGS

We adopt the Examiner's findings as our own (Final Act. 3–7). Additional findings of fact may appear in the Analysis that follows.

ANALYSIS

Rejection under 35 U.S.C. § 101

We are not persuaded of error on the part of the Examiner by the Appellants' argument that the claims are not directed to an abstract idea.

The Examiner found that the claims were directed to the abstract idea of property valuation (Ans. 5). The Appellants argue that the claims are directed to a much more specific subject matter. In the Appellants' view, the claims are directed to evaluating comparable properties in an automated valuation model by using a regression of property data that includes a traffic variable (Reply Br. 7).

We agree with the Examiner that the claims are directed to an abstract idea of property valuation because property valuation is a fundamental economic practice. *See Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d

1306, 1333–34 (Fed. Cir. 2015) (reviewing cases and holding a computer-implemented method of determining a price to be abstract). Even if we accept the Appellants' argument that the claims are directed to more than just property valuation, the use of a mathematical model to value property is also a fundamental economic practice. In addition, the use of regression modeling to do the calculation is a use of a mathematical algorithm which is also an abstract idea. Data analysis and algorithms are abstract ideas. *See, e.g.*, *Alice* 134 S. Ct. at 2355; *Bilski v. Kappos*, 561 U.S. 593, 611 (2010); *Parker v. Flook*, 437 U.S. 584, 594–95 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972). Put concisely, "[w]ithout additional limitations, a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible." *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014).

The Appellants also argue that in accordance with the second prong, the Examiner erred because the claims are more than data entering, data comparing, data outputting, and data displaying (Reply Br. 9–11). The Appellants direct our attention to the recitation of determining subset geographical areas and performing the regression modeling (*id.* at 9). As we discussed above, the performance of the regression modeling relates to calculations using an algorithm and is itself an abstract idea and therefore not substantially more than an abstract idea. With regard to the step of determining a subset geographical area, it is not clear how this step transforms the nature of the claim into a patent-eligible application of that abstract idea. Rather, this determining step is merely data analysis and

certainly does not improve computer functioning or "effect an improvement in any other technology or technical field." *Alice*, 134 S. Ct. at 2359.

We are not persuaded of error on the part of the Examiner by the Appellants' argument that the claims pose no risk of pre-empting the use of a concept across all fields of innovation (Reply Br. 4–5).

The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability. *Alice*, 134 S. Ct. at 2354. For this reason, questions on preemption are inherent in and resolved by the § 101 analysis. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). Preemption concerns are, thus, fully addressed and rendered moot where a claim is determined to disclose patent ineligible subject matter under the two-part framework described in *Mayo* and *Alice*. Although "preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Id.*

We are not persuaded of error by the Examiner by the Appellants' arguments that the Examiner's rejection relies upon overgeneralization of the subject matter of the claims (Reply Br. 6, 7–8). The Appellants argue that the Examiner must do more than assert that the claims are directed to the general technical field of the application to set forth a proper rejection under 35 U.S.C. § 101 (*id.* at 8). However, as explained above, as long as the Examiner's rejection notifies the Appellants of the reasons for such rejection together with such information and references as may be useful in judging the propriety of continuing prosecution of the application, a prima facie case is established. In the instant case, we determine that the Examiner

has notified the Appellants, stating the reasons for the rejection together with such information as may be useful in judging the propriety of continuing prosecution of the application. 35 U.S.C. § 132.

In view of the foregoing, we will sustain the Examiner's rejection of claims 1–6, 10–15, and 19–24.

Rejections under 35 U.S.C. § 103

Claims 1, 2, 10, 11, 19, and 20

We are not persuaded of error on the part of the Examiner by the Appellants' argument that Stinson does not teach regression correlating price to particular explanatory variables such as traffic (Appeal Br. 17–18). We note at the outset that nonobviousness cannot be established by attacking the references individually when the rejection is predicated upon a combination of prior art disclosures. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). In this instant case, the Examiner relies on Sennott for teaching traffic variables associated to properties located within each of the subset geographical areas (Final Act. 5). In regard to Stinson teaching a regression modeling correlating price to other variables, we agree with the Examiner that as paragraph 59 discloses that various characteristics or variables affect a property's market price and as paragraph 62 discloses that the market price analysis can be performed using regression to reconcile an adjustment to a first valuation of a property based on isolated variables, Stinson teaches this subject matter. In addition, although the adjustment is made after a first property valuation, this adjustment is itself a property valuation. We note that the claims are not limited to just one property valuation.

We are not persuaded of error on the part of the Examiner by the Appellants' argument that Stinson's regression does not relate to a subset of a geographic area and does not include breaking a geographical area into multiple distinct subsets of geographical areas (Appeal Br. 19–20). We agree with the Examiner that Stinson teaches this subject matter at paragraph 16 by teaching that the appraisal system can be directed to a specific neighborhood, city, or zip code (Final Act. 3). We agree that a larger area such as a county or state is broken up in order to do the analysis on just a neighborhood, city, or zip code.

We are not persuaded of error on the part of the Examiner by the Appellants' argument that Sennott does not teach that a valuation includes consideration of traffic variables because the traffic variables in Sennott are not considered until a field inspection which takes place after the valuation (Appeal Br. 21). As we stated above, the claims are not limited to just one valuation. In our view, even though a valuation is done prior to the field inspection, the valuation that includes the field inspection is a valuation as well. We note also, the Examiner relies on Sennott for teaching that traffic is one of the variables that can be considered to value property. As such, even if the consideration of traffic did not take place during a valuation of the property in Sennot, Sennott would nonetheless suggest to a person of ordinary skill in the art to use traffic as one of the variables in the regression model of Stinson.

We are not persuaded of error on the part of the Examiner by the Appellants' argument that there is no disclosure of the average commute time in CommuteTime.

We find that CommuteTime discloses that proximity to major highways plays a role in determining property value as most people would like to cut down on their commute time.

We agree with the Examiner that as CommuteTime teaches that a property's proximity to a highway affects one's commute time, CommuteTime suggests that average commute time may be used as a variable in making a property valuation to the same extent as is taught in Appellants' Specification (Final Act. 7).

In view of the foregoing, we will sustain the Examiner's rejection of claim 1.

We will also sustain the rejection as it is directed to claims 10 and 19 because, although the Appellants state that claim 10 does not stand or fall with claim 1, the Appellants do not explain why claim 10 should be considered separately by specifically pointing out how claim 10 contains patentable subject matter separate from claim 1 (Appeal Br. 26).

We will sustain the Examiner's rejection of claims 2, 11, and 20 for the reasons given above in our discussion of the rejection of claim 1.

Claims 3, 12, and 21

We are not persuaded of error on the part of the Examiner by the Appellants' argument that Traffic does not disclose whether the traffic feature is overlapped with the parcel of the candidate property and that no comparison is disclosed in the reference (Appeal Br. 30–31). We agree with the Examiner that the disclosure in Traffic at paragraphs 1 and 2 on page 3 that a negative effect on the value of a house is high traffic areas (areas that

overlap with the traffic feature) compared to houses in low traffic areas is a teaching of this subject matter as broadly claimed.

In view of the foregoing, we will sustain the rejection of claim 3. We will also sustain the rejection of claims 12 and 21 because the Appellants have not argued the separate patentability of these claims.

Claims 4, 5, 13, 14, 22, and 23

We will sustain the rejection of claims 4, 13, and 22. We are not persuaded of error on the part of the Examiner by the Appellants' argument in regard to claims 4, 13, and 22 that there is no discussion in Official Notice of examining the line between a candidate comparable property and a traffic feature because the Examiner does not take Official Notice of examining a line as argued by Appellants (Appeal Br. 32). The Official Notice taken by the Examiner is that it is old and well known to measure the distance between two objects by measuring a line (Final Act. 12). The Examiner reasons that since US60 determines the effect of noise from a major highway on the value of a home, measuring the distance to the highway is most accurately done using a line (*id.* at 12–13).

We will not sustain the Examiner's rejection of claims 5, 14, and 23 because we agree with the Appellants that Traffic does not disclose determining whether an intervening non-excluded parcel is present along the line between the traffic feature and the parcel of the candidate comparable property (Appeal Br. 32–33). Although it is true that Traffic discloses determining property values adjacent a freeway, this adjacent property is not disclosed to be between the traffic feature and the parcel of the candidate comparable property.

Claims 6, 15, and 24

We will sustain the rejection of claims 6, 15, and 24 because we agree with the Examiner that a person of ordinary skill in the art would have found the teaching in Traffic that the value of property is affected by the noise in the area and the teaching in SpeedLimit that reduced noise affects the value of property to suggest that variable of speed limits be included in valuing property.

DECISION

We affirm the Examiner's § 101 rejection.

We affirm the Examiner's § 103 rejections of claims 1–4, 10–13, 15, 19–22, and 24.

We do not affirm the Examiner's § 103 rejections of claims 5, 14, and 23.

TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1) (2009).

ORDER

AFFIRMED